for example, such a capillary may be used that is made of any other materials such as glass capillary.

Above the position B are provided a specimen loading syringe 123 constituting the specimen-injection mechanism and an electrophoretic-medium loading port 125 constituting the electrophoretic-medium-injection mechanism.

The specimen-injection mechanism includes the syringe 123 provided corresponding to a position of the specimen reservoir 15s when the chip 1 is positioned at the position B, a moving mechanism (not shown) for moving the syringe 123 in a three-dimensional direction (see an arrow 127 in the figure), and a cylinder driving mechanism (not shown) for permitting the syringe 123 to be engaged in suction and discharging. The suction/discharge opening of the syringe 123 is permitted to advance into the specimen reservoir 15s by the moving mechanism constituting the specimen-injection mechanism when the chip 1 is at the position B.

The port 125 is connected to a syringe (not shown) for containing an electrophoretic medium and is provided with a nozzle 131 given corresponding to a position of the anode reservoir 15a when the chip 1 is positioned at the position B. At the tip of the nozzle 131 is provided a seal member 133. The electrophoretic-medium injecting mechanism is comprised of the port 125, a syringe for pushing out an electrophoretic medium of the nozzle 131, and an elevation mechanism (not shown) for lifting/lowering the port 125 in a direction indicated by an arrow 135 in the figure. The elevation mechanism lowers the port 125 when the chip 1 is at the position B, thus bringing the top of the nozzle 131 in contact with the anode port 15a through the seal member 133.

Above the position C is provided an electrode port 137. The port 137 is provided with an electrode fixing member 139 and four electrodes 141 fixed to the member 139 corresponding to an arrangement of the reservoirs 15a, 15c, 15s, and 15w when the chip 1 is positioned at the position C. The electrodes 141 are connected to the high-voltage supplying device (not shown). Furthermore, the port 137 is provided with an elevation mechanism (not shown) for lifting/lowering the member 139, lifting/lowering the member 115 in a direction indicated by an arrow 143 in the figure. The electrode port 137, the high-voltage supplying device,

and the elevation mechanism constitute the voltage supplying mechanism. This elevation mechanism lowers the member 139 so that the tips of the electrodes 141 may advance into the reservoirs 15a, 15c, 15s, and 15w respectively when the chip 1 is at the position C.

Below the position C is provided a detecting optical system (detecting mechanism) 145. The detecting optical system 145 applies a detection light 147 to a detection position along the separation passage 13 between an intersection and the anode reservoir 15a when the chip 1 is at the position C to thereby detect a separated specimen based on a ultraviolet absorbance amount.

The chip holding mechanism, the electrophoretic-medium suction-and-buffer-liquid injection port 113, the specimen injection mechanism, and the electrophoretic-medium injection mechanism, the voltage supplying mechanism, and the detecting optical system 145 are controlled by the control part (not shown).

FIG. 12 is a flowchart for showing an example of operations of this embodiment. Those operations of this embodiment shall be described with reference to FIGS. 11 and 12. Here, the electrophoretic medium to be employed contains an organic polymer (hereinafter abbreviated as polymer).

The chip 1 is positioned at the position B (step S1).

The electrophoretic-medium loading port 125 is lowered to permit the tip of the nozzle 131 to come in contact with the anode reservoir 15a of the chip 1 through the seal member 133. A polymer contained in the syringe is pushed out of it and injected under pressure through the nozzle 131 and the anode reservoir 15a into the channel and the reservoirs 15c, 15s, and 15w of the chip 1. When the polymer comes out from all of the reservoirs 15c, 15s, and 15w, the injection is ended (step S2).

The electrophoretic-medium loading port 125 is lifted back to move the chip 1 to the position A (step S3).

The electrophoretic-medium suction-and-buffer liquid injection port 113 is lowered to permit the nozzles 117 and 119 to advance into the polymer contained in the reservoirs 15a, 15c, 15s, and 15w. The sucking mechanism linked to the suction nozzle 117 operates to suck through the suction nozzle 117 the

polymer contained in the reservoirs 15a, 15c, 15s, and 15w (step S4). After the removal of the polymer, the discharge mechanism linked to the discharge nozzle 119 corresponding to the reservoirs 15c, 15s, and 15w operates to inject a buffer liquid through the discharge nozzle 119 into the reservoirs 15c, 15s, and 15w except the specimen reservoir 15s (step S5).

The port 113 is lifted back to move the chip 1 to the position B (step S6).

The syringe 123 moves to permit the suction/discharge opening of the syringe 123 to advance into the empty specimen reservoir 15s. The syringe 123 starts suction to inject into the specimen reservoir 15s the specimen sucked into the syringe 123 from a specimen port (not shown) beforehand (step S7).

The syringe 123 is lifted back to move the chip 1 to the position C (step S8).

The electrode port 137 is lowered to permit the electrodes 141 to come in contact with the buffer liquid or the specimen contained in the reservoirs 15a, 15c, 15s, and 15w. A predetermined voltage is applied via the electrodes 141 on the buffer liquid or the specimen contained in the reservoirs 15a, 15c, 15s, and 15w to thereby guide the specimen to the intersection between the specimen-introduction passage and the separation passage and then switch the voltage, thus injecting the specimen into the separation passage (step S9).

The port 137 is lifted back to move the chip 1 to the position A (step S10).

The port 113 is lowered to permit the nozzles 117 and 119 to advance into the specimen or the buffer liquid contained in the reservoirs 15a, 15c, 15s, and 15w. The sucking mechanism linked to the suction nozzle 117 corresponding to the specimen reservoir 15s operates to suck and remove an extra specimen left in the specimen reservoir 15s through the suction nozzle 117 (step S11). After the removal of the specimen, the discharge mechanism linked to the discharge nozzle 119 corresponding to the specimen reservoir 15s operates to inject the buffer liquid into the specimen reservoir 15s through the discharge nozzle 119 (step S12).

The port 113 is lifted back to move the chip 1 to the position C (step S13).